

H.A

**Notice of Allowability****Application No.**

10/686,563

**Applicant(s)**

TOKUMASU ET AL.

**Examiner**

Hoan H. Tran

**Art Unit**

2852

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 03/24/2006.
2. ☒ The allowed claim(s) is/are 1-10, 12, 15-21, 23 and 26-35.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |  |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                     | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | 9. <input type="checkbox"/> Other _____.   |

## DETAILED ACTION

### *Allowable Subject Matter*

1. Claims 1-10, 12, 15-21, 23 and 26-35 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:

#### *Claims 1-8*

None of the prior art of record teaches or suggests a charging device comprising a charging member configured to be applied with a voltage wherein an alternating current voltage is superimposed on a direct current voltage to charge an image carrier; wherein a following relationship is satisfied:

$$7 \leq f/v \leq 17$$

where  $f$  is a frequency (Hz) of the alternating current voltage, and  $v$  is a moving speed (mm/sec) of the image carrier, and the frequency of the alternating current voltage being in a range between 2000 to 4500 Hz.

#### *Claims 9, 10, 12, 15-1, 31 and 32*

None of the prior art of record teaches or suggests an image process cartridge comprising a charging device configured to be applied with a voltage wherein an alternating current voltage is superimposed on a direct current voltage to charge an image carrier; wherein a following relationship is satisfied when the charging member charge an image forming area of the image carrier:

$$7 \leq f/v \leq 17,$$

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where  $f$  is a frequency (Hz) of the alternating current voltage, and  $v$  is a moving speed (mm/sec) of the image carrier, and a following relationship is satisfied when the charging member charge an area of the image carrier other than the image forming area of the image carrier:

$$0.5 \leq f/v \leq 7.$$

*Claims 20, 21, 23, 26-30 and 33-35*

None of the prior art of record teaches or suggests an image forming apparatus comprising a charging device configured to be applied with a voltage wherein an alternating current voltage is superimposed on a direct current voltage to charge an image carrier; wherein a following relationship is satisfied when the charging member charge an image forming area of the image carrier:

$$7 \leq f/v \leq 17,$$

where  $f$  is a frequency (Hz) of the alternating current voltage, and  $v$  is a moving speed (mm/sec) of the image carrier, and a following relationship is satisfied when the charging member charge an area of the image carrier other than the image forming area of the image carrier:

$$0.5 \leq f/v \leq 7.$$

***Prior Art***

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Matsumoto et al. [6,801,724] disclose an image forming apparatus.

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***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoan H. Tran whose telephone number is (571) 272-2141. The examiner can normally be reached from 8:30 AM - 5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Gray can be reached at (571) 272-2119. The central office fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

HHT  
June 11, 2006

A handwritten signature in black ink, appearing to read "Hoan Tran".

**HOAN TRAN  
PRIMARY EXAMINER**